

EDUCATION – NEWS CONSULT

MATHEMATICS

FINAL MARKING SCHEME

PAPER 1

OBJECTIVE TEST

[40 MARKS]

1. A	9. D	17. B	25. D	33. C
2. B	10. D	18. B	26. C	34. C
3. C	11. D	19. B	27. A	35. B
4. A	12. A	20. C	28. C	36. C
5. C	13. C	21. A	29. B	37. B
6. C	14. C	22. C	30. B	38. D
7. D	15. C	23. D	31. D	39. C
8. A	16. C	24. B	32. A	40. A

PAPER 1

[60 MARKS]

QUESTION ONE

a. Arko's earnings = $3 \times$ (Adom's earnings)

1 Mark

$$A = 3 \times 2,500$$

M1

$$= \text{GH}\text{¢ } 7,500$$

A1

Total income after five years = (sum of their income \times 12 months) \times 5

1 MARK

$$2,500 + 7,500$$

M1

$$10,000 \times 12$$

M1

$$120,000 \times 5$$

M1

$$600,000$$

A1

In five years, both of them will earn GH¢ 600,000.

1 MARK

b. $\sqrt{\frac{16}{100}} = \frac{4}{10}$

M1

$$\frac{4}{10}$$

M1

$$\frac{2}{5}$$

A1

c. $105^\circ + x = 180$

M1

$$x = 180 - 105$$

M1

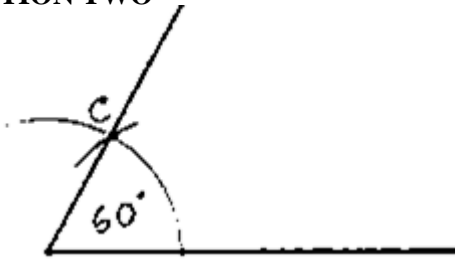
$$x = 45^\circ$$

A1

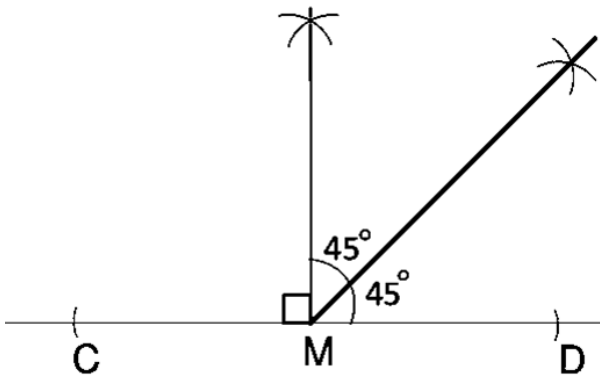
QUESTION TWO

a. i.

5 MARKS



ii.



5 MARKS

b. $23,000 \times 0.00013$

$(23.0 \times 10^3) \times (13.0 \times 10^{-5})$

M1

$(23 \times 13) \times (10^{3+(-5)})$

M1

299×10^{-2}

M1

2.99×10^1

M1

$= 2.99$

A1

QUESTION THREE

a.i $11 + (3x - 3) + 3 + 5 + 3x = 46$

M1

$11 - 3 + 6 + 3 + 5 + 3x = 46$

M1

$22 + 6x = 46$

M1

$6x = 46 - 22$

M1

$\frac{6x}{6} = \frac{24}{6}$

$x = 4$

A1

ii. Area = $L \times B$.

$L = 6 + 5$

M1

$L = 11$

A $\frac{1}{2}$

$B = 3(4) - 3$

M1

$12 - 3$

$= 9$

A $\frac{1}{2}$

$a = 11 \times 9$		M1
$99cm^2$		A1
$a = L \times B$		
$a = 3 \times 5$		M1
$15cm^2$		A1
$a = 15 + 99$		M1
$114cm^2$		A1

QUESTION FOUR

a. Area of a circle = πr^2		
$A = \pi r^2$	M ₁	M1
$A = 154$		M1
$\pi = \frac{22}{7}$	M ₁	M1
$154 = \frac{22}{7} \times r^2$	M ₁	M1
$\frac{7 \times 154}{22} = \frac{22 r^2}{22}$		M1
$r^2 = 7 \times 7$	M ₁	M1
$\sqrt{r^2} = \sqrt{7 \times 7}$		M1
$r = 7$		A1
$d = 2r$		M1
$d = 2(7)$		M1
$d = 14cm$		A1
b. $a = \frac{1}{2} bh$		
$a = \frac{1}{2} (6) (6)$		M1
$1 \times 3 \times 6$		M1
$18cm^2$		A1

QUESTION FIVE

a. Ebo's weight = 28.6kg		
His father weight = 4 (Ebo's weight)		M1
Father's weight = 4 (28.6)		M1
Father's weight = 114.4kg		A1
Total weight = 28.6kg + 114.4kg		M1
= 142.8kg		A1
b. $\frac{3}{5}$ of 2500		M1
$\frac{3}{5} \times 2500$		M1
1500		
\therefore GHC1500 is left		A1
c. i. 5: 15 = 12: M		
$\frac{4}{15} = \frac{12}{M}$		M1
$4 \times M = 15 \times 12$ (cross multiply)		M1
$\frac{4M}{4} = \frac{180}{4}$		M1
$M = 45$		A1

ii. $4:15 = 20:N$

$$\frac{4}{15} = \frac{20}{N}$$

$$\frac{4 \times N}{4} = \frac{20 \times 15}{4}$$

$$4 \times N = 20 \times 15$$

$$\frac{4N}{4} = \frac{300}{4}$$

$$N=75$$

M1

M1

A1

QUESTION SIX

- a. Commission = 25%

Total sales = GH¢ 2,000

Monthly salary = GH¢ 1,200

Commission = 25 of 2,000

M1

$$C = \frac{25}{100} \times 2,000$$

M1

$$25 \times 20$$

M1

Commission = 500

A1

Total earning = 1,200 + 500

M1

1,7000

GH¢ 1,7000

A1

- b. i. 5 mathematical sets

1 = GH¢ 5.00

$$5 = 5 \times 5$$

M1

GH¢ 25

A1

ii. 6 pens

1 = GH¢ 1.00

$$6 = 6 \times 1$$

M1

GH¢ 6.00

A1

iii. 10 rules

1 = GH¢ 1.20

$$10 = 10 \times 1.20$$

M1

GH¢ 12

A1

iv. 1 graph book = GH¢ 2.50

A1

v. total = 25 + 6 + 12 + 2.50

M1

GH¢ 45.5

Amount required = GH¢ 45.5

A1